

CLAIMS

1. A production method for processed soybean food products that includes a grinding step (A) in which raw soybeans are
5 ground to provide a soybean slurry and a heating step (B) in which the provided soybean slurry is heated and thermally denatured, wherein

partway through the heating step (B), a deaeration step (C) for removing air bubbles mixed in with the soybean slurry
10 is performed.

2. The production method for processed soybean food products according to claim 1, wherein the heating step (B) and the deaeration step (C) are performed continuously.

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3. The production method for processed soybean food products according to claim 1 or 2, wherein the heating step (B) comprises a first heating step in which a temperature of the soybean slurry is raised to a predetermined intermediate
20 temperature and a second heating step in which the soybean slurry is further heated, and wherein the deaeration step (C) is performed between the first heating step and the second heating step.

25 4. The production method for processed soybean food products according to any of claims 1 to 3, wherein the deaeration step (C) is performed at the point when the soybean slurry reaches

a temperature range of 75 to 125°C in the heating step (B).

5. The production method for processed soybean food products according to claim 4, wherein the deaeration step (C) is performed at the point when the soybean slurry reaches a temperature range of 75 to 100°C in the heating step (B)

6. The production method for processed soybean food products according to any of claims 1 to 5, wherein the deaeration step (C) is a method for removing air bubbles in which the soybean slurry is depressurized such that the temperature of the soybean slurry decreases by at least 3°C or more.

7. The production method for processed soybean food products according to any of claims 1 to 5, wherein in the heating step (B), the soybean slurry flows alternately through a large diameter pipe and a small diameter pipe.

8. The production method for processed soybean food products according to claim 7, wherein, in the heating step (B), the soybean slurry flows alternately between a large diameter pipe arranged in a straight line and a small diameter pipe bent in a turning configuration.

9. The production method for processed soybean food products according to claim 8, wherein, in the small diameter pipe that is bent in a turning configuration, the soybean slurry is

heated by steam being blown into the soybean slurry.

10. An apparatus for thermal deaeration of a soybean slurry comprising:

5 a first heating apparatus that raises the temperature of the soybean slurry to a predetermined intermediate temperature;

 a deaeration apparatus that deaerates the soybean slurry that has reached the intermediate temperature in the first heating apparatus; and

 a second heating apparatus that completes thermal denaturation by further heating the soybean slurry that has been deaerated by the deaeration apparatus.

15 11. The apparatus for thermal deaeration of a soybean slurry according to claim 10, wherein the first heating apparatus and the second heating apparatus are provided with: a liquid feed pipe through which the soybean slurry is continuously circulated; a steam mixing apparatus that heats the soybean
20 slurry circulating through the liquid feed pipe by mixing it with steam; and a liquid feed pump for feeding the soybean slurry into the liquid feed pipe.

12. The apparatus for thermal deaeration of a soybean slurry
25 according to claim 11, wherein the liquid feed pipe comprises a continuous succession of large diameter pipes alternating with small diameter pipes.

13. The apparatus for thermal deaeration of a soybean slurry according to claim 12, wherein small diameter pipes that are bent in a turning configuration are interposed between a
5 plurality of large diameter pipes arranged in straight lines.

14. The apparatus for thermal deaeration of a soybean slurry according to claim 13, wherein the steam mixing apparatus that blows steam into the soybean slurry is connected to a portion
10 of the small diameter pipe that is bent in a turning configuration.

15. The apparatus for thermal deaeration of a soybean slurry according to any of claims 10 to 14, wherein the deaeration
15 apparatus is provided with a deaeration chamber in which soybean slurry is stored and a suction apparatus for suctioning out air inside this deaeration chamber.